



Agency for Healthcare Research and Quality  
Advancing Excellence in Health Care



NATIONAL  
**GUIDELINE**  
CLEARINGHOUSE

## General

### Guideline Title

Prevention of falls in community-dwelling older adults: U.S. Preventive Services Task Force recommendation statement.

### Bibliographic Source(s)

U.S. Preventive Services Task Force. Prevention of falls in community-dwelling older adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2012 Aug 7;157(3):197-204. [29 references] [PubMed](#)

### Guideline Status

This is the current release of the guideline.

## Recommendations

### Major Recommendations

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and identifies the Levels of Certainty regarding Net Benefit (High, Moderate, and Low). The definitions of these grades can be found at the end of the "Major Recommendations" field.

#### Summary of Recommendations and Evidence

The USPSTF recommends exercise or physical therapy and vitamin D supplementation to prevent falls in community-dwelling adults aged 65 years or older who are at increased risk for falls. This is a B recommendation.

No single recommended tool or brief approach can reliably identify older adults at increased risk for falls, but several reasonable and feasible approaches are available for primary care clinicians. See the Clinical Considerations section for additional information on risk assessment.

The USPSTF does not recommend automatically performing an in-depth multifactorial risk assessment in conjunction with comprehensive management of identified risks to prevent falls in community-dwelling adults aged 65 years or older because the likelihood of benefit is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms on the basis of the circumstances of prior falls, comorbid medical conditions, and patient values. This is a C recommendation.

See the Clinical Considerations section for more information about providing this service for individual patients.

#### Clinical Considerations

##### Patient Population under Consideration

This recommendation applies to interventions that are feasible in primary care for community-dwelling adults aged 65 years or older.

## Brief Assessment of Individual Risk in Primary Care

Primary care clinicians can reasonably consider a small number of factors to identify older persons at increased risk for falls. Age itself is strongly related to risk for falls. Several clinical factors, including a history of falls, a history of mobility problems, and poor performance on the timed Get-Up-and-Go test, also identify persons at increased risk for falling. A history of falling is most commonly used to identify increased risk for future falling and has generally been considered concurrently or sequentially with other key risk factors, particularly gait and balance. A pragmatic, expert-supported approach to identifying high-risk persons uses a history of falls and mobility problems and the results of a timed Get-Up-and-Go test. The test is performed by observing the time it takes a person to rise from an armchair, walk 3 meters (10 feet), turn, walk back, and sit down again. The average healthy adult older than 60 years can perform this task in less than 10 seconds. The USPSTF did not find evidence about frequency of a brief falls risk assessment, but other organizations, including the American Geriatric Society (AGS), recommend that clinicians ask their patients yearly about falls and balance or gait problems.

## Interventions

Effective exercise and physical therapy interventions include group classes and at-home physiotherapy strategies. Effective interventions range in intensity from low ( $\leq 9$  hours) to high ( $> 75$  hours). The U.S. Department of Health and Human Services recommends that older adults get at least 150 minutes per week of moderate-intensity or 75 minutes per week of vigorous-intensity aerobic physical activity, as well as muscle-strengthening activities twice per week. It also recommends balance training 3 or more days per week for older adults at risk for falling because of a recent fall or difficulty walking. The AGS recommends that exercise interventions include balance, gait, and strength training.

The trials studied a wide range of doses and durations for vitamin D supplementation; the median dose was 800 IU daily and the median duration was 12 months. The data suggest that benefit from vitamin D supplementation occurs by 12 months; the efficacy of shorter treatment is unknown. According to the Institute of Medicine, the recommended daily allowance for vitamin D is 600 IU for adults age 51 to 70 years and 800 IU for adults older than 70 years. The AGS recommends 800 IU per day for persons at increased risk for falls.

The following interventions lack sufficient evidence for or against use in prevention of falls in community-dwelling older adults: vision correction, medication discontinuation, protein supplementation, education or counseling, and home hazard modification.

## Other Approaches to Prevention

The Centers for Disease Control and Prevention has published details on implementing community-based interventions to prevent falls. The USPSTF's recommendation on vitamin D and calcium supplementation to prevent cancer and fractures is being updated and will be available at [www.uspreventiveservicestaskforce.org](http://www.uspreventiveservicestaskforce.org)  when complete.

## Useful Resources

The USPSTF recommends screening for osteoporosis in women aged 65 years or older. More information is available at [www.uspreventiveservicestaskforce.org](http://www.uspreventiveservicestaskforce.org) .

## Definitions:

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	<i>Note: The following statement is undergoing revision.</i> Clinicians may provide this service to selected patients depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service.	Offer or provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms	Discourage the use of this service.

Grade	outweigh the benefits. Grade Definitions	Suggestions for Practice
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If this service is offered, patients should understand the uncertainty about the balance of benefits and harms.

#### USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	<p>The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as:</p> <ul style="list-style-type: none"> <li>• The number, size, or quality of individual studies</li> <li>• Inconsistency of findings across individual studies</li> <li>• Limited generalizability of findings to routine primary care practice</li> <li>• Lack of coherence in the chain of evidence</li> </ul> <p>As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.</p>
Low	<p>The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of:</p> <ul style="list-style-type: none"> <li>• The limited number or size of studies</li> <li>• Important flaws in study design or methods</li> <li>• Inconsistency of findings across individual studies</li> <li>• Gaps in the chain of evidence</li> <li>• Findings not generalizable to routine primary care practice</li> <li>• A lack of information on important health outcomes</li> </ul> <p>More information may allow an estimation of effects on health outcomes.</p>

## Clinical Algorithm(s)

None provided

## Scope

## Disease/Condition(s)

- Falls
- Fall-related injuries

## Guideline Category

Prevention

Risk Assessment

## Clinical Specialty

Family Practice

Geriatrics

Nursing

Preventive Medicine

## Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dietitians

Health Care Providers

Nurses

Physical Therapists

Physician Assistants

Physicians

Public Health Departments

Social Workers

## Guideline Objective(s)

To summarize the current U.S. Preventive Services Task Force recommendations and supporting scientific evidence for reducing falls and improving health outcomes in community-dwelling older adults

## Target Population

Community-dwelling adults aged 65 years or older

## Interventions and Practices Considered

1. Exercise
2. Physical therapy
3. Vitamin D supplementation
4. Multifactorial risk assessment in conjunction with comprehensive management of identified risks to prevent falls (recommended on a case-by-case basis)

## Major Outcomes Considered

Key Question 1: Is there direct evidence that primary care interventions reduce fall-related injury, improve quality of life, reduce disability, or reduce mortality when used alone or in combination to reduce falls in community-dwelling older adults?

Key Question 1a: Do these interventions reduce injury, improve quality of life, reduce disability, or reduce mortality in older adults specifically identified as high risk for falls?

Key Question 2: Do primary care interventions used alone or in combination in community-dwelling older adults prevent falling?

Key Question 2a: Do these interventions prevent falling in older adults specifically identified as high risk for falls?

Key Question 2b: Are there positive outcomes other than reduced falling, and related morbidity and mortality, that result from primary care interventions to prevent falling?

Key Question 3: What are the adverse effects associated with interventions to prevent falling?

Key Question 4: How are high-risk older adults identified for primary care interventions to prevent falling?

## Methodology

### Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

### Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) for use by the U.S. Preventive Services Task Force (see the "Availability of Companion Documents" field).

#### Searches and Selection Process

EPC staff searched multiple databases (MEDLINE, Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects, and Health Technology Assessments) and Web sites (Institute of Medicine, the Agency for Healthcare Quality and Research [AHRQ], and National Institute for Health and Clinical Excellence) to identify relevant, good-quality systematic reviews published between January 1991 and October 2007. EPC staff found 13 existing systematic reviews for interventions to prevent falls. Using guidelines for integrating systematic reviews, 2 independent reviewers assessed relevancy (research questions and scope) and quality of identified reviews. Citations from 1 recent good-quality review of fall interventions were used and then MEDLINE, the Cochrane Central Register of Controlled Trials, and CINAHL were searched from the end of the previous review's search date of January 2002 to February 2010 to identify additional trials. MEDLINE and CINAHL were searched from 1992 (the earliest publication date of the included trials) through February 2010 to locate studies of harms for the included interventions. The review of harms of vitamin D supplementation and vision screening or early treatment was limited to previously synthesized evidence. Randomized, controlled trials (RCTs) of community-dwelling older adults (average age  $\geq 65$  years) in settings generalizable to U.S. primary care populations were included. Trials were included if they were designed to assess fall prevention based on assessment of falling or falls as a primary or secondary outcome. Trials were excluded if they were not conducted in primary care or other settings with a primary care-comparable population (for example, hospitals, nursing homes, rehabilitation centers, or other long-term care facilities) and trials without a true control group. Inclusion and exclusion criteria and search strategies are available in the full evidence report (see "Availability of Companion Documents" field).

### Number of Source Documents

3423 abstracts and 638 full-text articles

# Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

## Rating Scheme for the Strength of the Evidence

Two independent investigators critically appraised all included articles using design-specific criteria (see Appendix B, Table 3 in the Evidence Synthesis [see the "Availability of Companion Documents" field]). Discrepancies in quality ratings were resolved in consultation with a third investigator.

## Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

## Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

### Quality Assessment and Data Abstraction

Two investigators independently screened all abstracts for inclusion. A total of 3423 abstracts and 638 full-text articles (see Appendix Figure 2 of the evidence report) were screened. Two investigators independently critically appraised all articles by using the USPSTF quality criteria. In brief, the USPSTF quality criteria for randomized controlled trials (RCTs) includes consideration of assembly and maintenance of comparable groups; differential loss to follow-up or overall high loss to follow-up; a clear definition of the intervention; equal, reliable, and valid outcome measurement; and intention-to-treat analysis. Good-quality and fair-quality articles meeting the inclusion criteria were retained, and studies with fatal flaws were rated poor quality and not included. Discrepancies were resolved through consultation with a third investigator. One reviewer abstracted relevant information into standardized evidence tables for each included article, and a second reviewer checked the abstraction.

### Data Synthesis and Statistical Analysis

EPC staff qualitatively synthesized the included trials and summarized the results in tables, stratifying the discussion of evidence by similar intervention groupings (for example, physical activity, vitamin D, vision correction, and multifactorial assessment and management). When possible, they also quantitatively pooled fall-related outcomes to estimate the effect size of these intervention groupings. Falling was assessed in a variety of ways (number of fallers, fall rate, time to first fall, and number of frequent fallers). Number of fallers was the most consistently assessed measure of falling; the other measures were used more selectively. Thus, primary analyses estimated relative risk for falling by using random-effects models.

Separate analyses were conducted for each intervention category. For single clinical treatments, the analyses were further stratified by treatment type. For trials with multiple intervention groups in which the interventions were variations of the same intervention type (for example, 2 exercise programs), estimates were calculated for the more intense groups. The presence of statistical heterogeneity among the studies was assessed by using standard chi-square tests and estimated the magnitude of heterogeneity by using the  $I^2$  statistic. A series of random-effects meta-regression models were used to examine potential sources of heterogeneity in fall risks; such sources include mean age, average age of 80 years or older, proportion of women, proportion of participants with a history of falling in the previous year, comprehensiveness or intensity of the intervention, and whether the sample comprised high-risk participants. All meta-analyses were done by using Stata software, version 10.1 (StataCorp, College Station, Texas).

## Methods Used to Formulate the Recommendations

Balance Sheets

Expert Consensus

## Description of Methods Used to Formulate the Recommendations

The U.S. Preventive Services Task Force (USPSTF) systematically reviews the evidence concerning both the benefits and harms of widespread implementation of a preventive service. It then assesses the certainty of the evidence and the magnitude of the benefits and harms. On the basis of this assessment, the USPSTF assigns a letter grade to each preventive service signifying its recommendation about provision of the service (see Table below). An important, but often challenging, step is determining the balance between benefits and harms to estimate "net benefit" (that is, benefits minus harms).

Table 1. U.S. Preventive Services Task Force Recommendation Grid\*

Certainty of Net Benefit	Magnitude of Net Benefit			
	Substantial	Moderate	Small	Zero/Negative
High	A	B	C	D
Moderate	B	B	C	D
Low	Insufficient			

\*A, B, C, D, and I (*Insufficient*) represent the letter grades of recommendation or statement of insufficient evidence assigned by the U.S. Preventive Services Task Force after assessing certainty and magnitude of net benefit of the service (see the "Rating Scheme for the Strength of the Recommendations" field).

The U.S. Preventive Services Task Force (USPSTF) systematically reviews the evidence concerning both the benefits and harms of widespread implementation of a preventive service. It then assesses the certainty of the evidence and the magnitude of the benefits and harms. On the basis of this assessment, the USPSTF assigns a letter grade to each preventive service signifying its recommendation about provision of the service (see Table below). An important, but often challenging, step is determining the balance between benefits and harms to estimate "net benefit" (that is, benefits minus harms).

The overarching question that the USPSTF seeks to answer for every preventive service is whether evidence suggests that provision of the service would improve health outcomes if implemented in a general primary care population. For screening topics, this standard could be met by a large randomized, controlled trial (RCT) in a representative asymptomatic population with follow-up of all members of both the group "invited for screening" and the group "not invited for screening."

Direct RCT evidence about screening is often unavailable, so the USPSTF considers indirect evidence. To guide its selection of indirect evidence, the USPSTF constructs a "chain of evidence" within an analytic framework. For each key question, the body of pertinent literature is critically appraised, focusing on the following 6 questions:

1. Do the studies have the appropriate research design to answer the key question(s)?
2. To what extent are the existing studies of high quality? (i.e., what is the internal validity?)
3. To what extent are the results of the studies generalizable to the general U.S. primary care population and situation? (i.e., what is the external validity?)
4. How many studies have been conducted that address the key question(s)? How large are the studies? (i.e., what is the precision of the evidence?)
5. How consistent are the results of the studies?
6. Are there additional factors that assist the USPSTF in drawing conclusions (e.g., presence or absence of dose-response effects, fit within a biologic model)?

The next step in the process is to use the evidence from the key questions to assess whether there would be net benefit if the service were implemented. In 2001, the USPSTF published an article that documented its systematic processes of evidence evaluation and recommendation development. At that time, the USPSTF's overall assessment of evidence was described as good, fair, or poor. The USPSTF realized that this rating seemed to apply only to how well studies were conducted and did not fully capture all of the issues that go into an overall assessment of the evidence about net benefit. To avoid confusion, the USPSTF has changed its terminology. Whereas individual study quality will continue to be characterized as good, fair, or poor, the term *certainty* will now be used to describe the USPSTF's assessment of the overall body of evidence about net benefit of a preventive service and the likelihood that the assessment is correct. Certainty will be determined by considering all 6 questions listed above; the judgment about certainty will be described as high, moderate, or low.

In making its assessment of certainty about net benefit, the evaluation of the evidence from each key question plays a primary role. It is important to note that the USPSTF makes recommendations for real-world medical practice in the United States and must determine to what extent the evidence for each key question—even evidence from screening RCTs or treatment RCTs—can be applied to the general primary care population. Frequently, studies are conducted in highly selected populations under special conditions. The USPSTF must consider differences between the general primary care population and the populations studied in RCTs and make judgments about the likelihood of observing the same effect in actual practice.

It is also important to note that one of the key questions in the analytic framework refers to the potential harms of the preventive service. The USPSTF considers the evidence about the benefits and harms of preventive services separately and equally. Data about harms are often obtained from observational studies because harms observed in RCTs may not be representative of those found in usual practice and because some harms are not completely measured and reported in RCTs.

Putting the body of evidence for all key questions together as a chain, the USPSTF assesses the certainty of net benefit of a preventive service by asking the 6 major questions listed above. The USPSTF would rate a body of convincing evidence about the benefits of a service that, for example, derives from several RCTs of screening in which the estimate of benefits can be generalized to the general primary care population as "high" certainty (see the "Rating Scheme for the Strength of Recommendations" field). The USPSTF would rate a body of evidence that was not clearly applicable to general practice or has other defects in quality, research design, or consistency of studies as "moderate" certainty. Certainty is "low" when, for example, there are gaps in the evidence linking parts of the analytic framework, when evidence to determine the harms of treatment is unavailable, or when evidence about the benefits of treatment is insufficient. Table 4 in the methodology document listed below (see the "Availability of Companion Documents" field) summarizes the current terminology used by the USPSTF to describe the critical assessment of evidence at all 3 levels: individual studies, key questions, and overall certainty of net benefit of the preventive service.

Sawaya GF et al. Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. *Ann Intern Med.* 2007;147:871-875.[5 references].

## Rating Scheme for the Strength of the Recommendations

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	<i>Note: The following statement is undergoing revision.</i> Clinicians may provide this service to selected patients depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service.	Offer or provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If this service is offered, patients should understand the uncertainty about the balance of benefits and harms.

### USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net

benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	<p>The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as:</p> <ul style="list-style-type: none"> <li>• The number, size, or quality of individual studies</li> <li>• Inconsistency of findings across individual studies</li> <li>• Limited generalizability of findings to routine primary care practice</li> <li>• Lack of coherence in the chain of evidence</li> </ul> <p>As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.</p>
Low	<p>The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of:</p> <ul style="list-style-type: none"> <li>• The limited number or size of studies</li> <li>• Important flaws in study design or methods</li> <li>• Inconsistency of findings across individual studies</li> <li>• Gaps in the chain of evidence</li> <li>• Findings not generalizable to routine primary care practice</li> <li>• A lack of information on important health outcomes</li> </ul> <p>More information may allow an estimation of effects on health outcomes.</p>

## Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

## Method of Guideline Validation

Comparison with Guidelines from Other Groups

External Peer Review

Internal Peer Review

## Description of Method of Guideline Validation

Peer Review. Before the U.S. Preventive Services Task Force (USPSTF) makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft evidence review to 4 to 6 external experts and to Federal agencies and professional and disease-based health organizations with interests in the topic. The experts are asked to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the USPSTF in memo form. In this way, the USPSTF can consider these external comments before it votes on its recommendations about the service. Draft recommendation statements are then circulated for comment among reviewers representing professional societies, voluntary organizations, and Federal agencies, as well as posted on the Task Force Web site for public comment. These comments are discussed before the final recommendations are confirmed.

Response to Public Comments. A draft version of this recommendation statement was posted for public comment on the USPSTF Web site from 12 January to 9 February 2011. Many comments pointed out a lack of clarity about how to identify adults at increased risk for falls who would qualify for the recommended interventions. Although the evidence is limited on tools to assess risk for falls, the USPSTF provided a pragmatic approach to assessing risk in the Clinical Considerations section. Several comments requested clarification on the difference between assessing an older adult for increased risk (for whom the vitamin D and physical activity interventions should be applied) and the more comprehensive "multifactorial risk assessment," which is the focus of the C recommendation. The USPSTF provided more information throughout the statement to clarify what is meant by a "brief" risk assessment and "multifactorial risk assessment." Many respondents commented on the perceived difference between the USPSTF recommendation and the American Geriatrics Society (AGS) guideline on multifactorial assessments. More information on the AGS guideline was provided in several sections of the statement to clarify the similarities.

Comparison with Guidelines from Other Groups. Recommendations from the following groups were discussed: The Centers for Disease Control and Prevention, the National Institute on Aging, and the AGS.

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of supporting evidence is not specifically stated for each recommendation.

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

#### Benefits of Early Intervention

The U.S. Preventive Services Task Force (USPSTF) found convincing evidence that exercise or physical therapy has moderate benefit in preventing falls in older adults. Adequate evidence indicates that vitamin D supplementation has moderate benefit in preventing falls in this population and that interventions identified and categorized as multifactorial risk assessment with comprehensive management of identified risks have at least a small benefit in preventing falls. Comprehensive multifactorial assessment and management interventions include assessment of multiple risk factors for falls and providing medical and social care to address factors identified during the assessment. It is possible that some combination of interventions in a select population could provide important benefits, but given the current evidence, the USPSTF is uncertain what that combination or population would be.

### Potential Harms

#### Harms of Early Intervention

- The U.S. Preventive Services Task Force (USPSTF) found convincing evidence that the harms of vitamin D supplementation are no greater than small. Adequate evidence indicates that the harms of physical therapy or exercise are small. These harms include a paradoxical increase in falls and an increase in physician visits.
- The USPSTF found convincing evidence that the harms of multifactorial assessment with comprehensive management of identified risks are no greater than small.

## Qualifying Statements

### Qualifying Statements

- The U.S. Preventive Services Task Force (USPSTF) makes recommendations about the effectiveness of specific clinical preventive services for patients without related signs or symptoms.

- It bases its recommendations on the evidence of both the benefits and harms of the service and an assessment of the balance. The USPSTF does not consider the costs of providing a service in this assessment.
- The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision making to the specific patient or situation. Similarly, the USPSTF notes that policy and coverage decisions involve considerations in addition to the evidence of clinical benefits and harms.

## Implementation of the Guideline

### Description of Implementation Strategy

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the USPSTF Task Force will make all its products available through its [Web site](#) . The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access USPSTF materials and adapt them for their local needs. Online access to USPSTF products also opens up new possibilities for the appearance of the annual, pocket-size *Guide to Clinical Preventive Services*.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

### Implementation Tools

Foreign Language Translations

Patient Resources

Quick Reference Guides/Physician Guides

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Staying Healthy

## IOM Domain

Effectiveness

Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

U.S. Preventive Services Task Force. Prevention of falls in community-dwelling older adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2012 Aug 7;157(3):197-204. [29 references] [PubMed](#)

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

2012 May

### Guideline Developer(s)

U.S. Preventive Services Task Force - Independent Expert Panel

### Guideline Developer Comment

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the U.S. Preventive Services Task Force do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

### Source(s) of Funding

United States Government

### Guideline Committee

U.S. Preventive Services Task Force (USPSTF)

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*\*Members of the U.S. Preventive Services Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to <http://www.uspreventiveservicestaskforce.org/Page/Name/our-members> .*

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## Guideline Status

This is the current release of the guideline.

## Guideline Availability

Electronic copies: Available from the [U.S. Preventive Services Task Force \(USPSTF\) Web site](#) .

## Availability of Companion Documents

The following are available:

Evidence Reviews:

- Michael YL, Lin JS, Whitlock EP, Gold R, Fu R, O'Connor EA, Zuber SP, Beil TL, Lutz KW. Interventions to prevent falls in older adults: an updated systematic review. Evidence Synthesis No. 80. AHRQ Publication No. 11-05150-EF-1. Rockville, MD: Agency for Healthcare Research and Quality, 2010 Dec.
- Michael YL, Whitlock EP, Lin JS, Fu R, O'Connor EA, Gold R. Primary care-relevant interventions to prevent falling in older adults: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2010;153(12):815-825.

Electronic copies: Available from the [U.S. Preventive Services Task Force \(USPSTF\) Web site](#) .

Background Articles:

- Barton M et al. How to read the new recommendation statement: methods update from the U.S. Preventive Services Task Force. *Ann Intern Med.* 2007;147:123-127.
- Guirguis-Blake J et al. Current processes of the U.S. Preventive Services Task Force: refining evidence-based recommendation development. *Ann Intern Med.* 2007;147:117-122. [2 references]
- Sawaya GF et al. Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. *Ann Intern Med.* 2007;147:871-875. [5 references].

Electronic copies: Available from the [U.S. Preventive Services Task Force \(USPSTF\) Web site](#) .

The following are also available:

- Prevention of falls in community-dwelling older adults. Clinical summary of U.S. Preventive Services Task Force recommendation. AHRQ

Publication No. 11-05150-EF-3, May 2012. Electronic copies: available from the [USPSTF Web site](#) .

- The guide to clinical preventive services, 2010-2011. Recommendations of the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2010. 292 p. Electronic copies available from the [AHRQ Web site](#) . See the related QualityTool summary on the [Health Care Innovations Exchange Web site](#) .
- A continuing medical education (CME) activity is available from the [Annals of Internal Medicine Web site](#) .

The [Electronic Preventive Services Selector \(ePSS\)](#) , available as a PDA application and a web-based tool, is a quick hands-on tool designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients. It is based on current recommendations of the USPSTF and can be searched by specific patient characteristics such as age, sex, and selected behavioral risk factors.

## Patient Resources

The following are available:

- Preventing falls in older adults. Understanding Task Force recommendations. U.S. Preventive Services Task Force. Consumer fact sheet. 2012 May. 3 p. Electronic copies: Available in Portable Document Format (PDF) from the [U.S. Preventive Services Task Force \(USPSTF\) Web site](#) .
- Women: stay healthy at any age. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 10-IP002-A. 2010 Aug. 2 p. Electronic copies: Available in PDF in [English](#)  and [Spanish](#)  from the AHRQ Web site. See the related QualityTool summary on the [Health Care Innovations Exchange Web site](#) .
- Men: stay healthy at any age. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 10-IP004-A. 2010 Aug. 2 p. Electronic copies: Available in PDF in [English](#)  and [Spanish](#)  from the AHRQ Web site. See the related QualityTool summary on the [Health Care Innovations Exchange Web site](#) .

Print copies: Available in English and Spanish from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to <http://www.ahrq.gov/research/publications/index.html>  or call 1-800-358-9295 (U.S. only).

Myhealthfinder is a new tool that provides personalized recommendations for clinical preventive services specific to the user's age, gender, and pregnancy status. It features evidence-based recommendations from the USPSTF and is available at [www.healthfinder.gov](http://www.healthfinder.gov) .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## NGC Status

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